The Freshwater Trust™ Changing the course of conservation.

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September 27, 2013

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Sent via email only: stellmach.nancy@deq.state.or.us

Re: **City of Wilsonville Proposed Modification of Permit and City of Wilsonville Proposed Water Quality Trading Program**

Dear Ms. Stellmach:

On behalf of The Freshwater Trust, I provide the comments below to suggest improvements to the proposed modification to the City of Wilsonville's (the City) National Pollution Discharge Elimination Systems (NPDES) permit.[1] We believe that in this case, the water quality trading solution is the best solution to address the City's projected thermal exceedance. In the end, the choice here is stark: a cooling tower that provides virtually no benefit to water quality, or the restoration of streamside vegetation that, while small compared to the watershed, is the type of action that the river and the fish desperately need.

The interest around this modification is a microcosm of what is wrong with the water quality permitting status quo—innovative solutions are caught in a battle between those who want more from a state agency than what current law requires, and a state agency that has been so brow-beaten by detractors that it takes the most conservative approach possible for fear of attack for any innovative action. The result is a cycle of anemic progress. Meanwhile the population grows, climate change intensifies, the river warms and the fish suffer.

We must focus on the outcomes for the river. Science and technology have progressed to the point that we can quantify the benefits of restorations actions such that they can fulfill compliance obligations. Clean Water Act (CWA) rules and regulations have been slow to keep pace with that progress, but the authority for innovative action is there, and with the right safeguards written into the permit, there is a path forward.

Founded in 1983, The Freshwater Trust is a 501(c)(3) not-for-profit conservation organization committed to accelerating the pace and scale of restoration of freshwater ecosystems. As an organization that began decades ago as a wild fish advocacy group that helped list several of the first Pacific Salmon under the Endangered Species Act (ESA), The Freshwater Trust understands well what is at stake for freshwater ecosystems and the species that depend on them.

[1] Oregon Dep't of Envtl. Quality, Wilsonville NPDES Permit No. 101888 (issued 2010) [hereinafter "Wilsonville NPDES Permit"].

The Freshwater Trust is in the process of negotiating a contract with the City of Wilsonville and its facility contractor, CH2M Hill, to provide it with quantified thermal credits generated from riparian restoration projects implemented in tributaries of the Willamette River. Wilsonville would use these thermal credits to satisfy compliance obligations set forth in its NPDES permit and this proposed modification. Through this letter, we ask DEQ to consider The Freshwater Trust's analysis of the proposed modification and trading program in light of its extensive and relevant experience in water quality trading, and its 30 years of conservation expertise and leadership. We also discuss below the significant resource protection and enhancement available through the implementation of innovative policies like water quality trading, which we hope provides a useful perspective for DEQ.

I. The Freshwater Trust's Vision for the Future

We need new tools and new methods to address our evolved understanding of water quality concerns. Despite outstanding advocacy and restoration efforts over the last four decades, we are nowhere near achieving the freshwater health imagined by the architects of the CWA or ESA, on any timeline, for any dollar figure. The onus is on us as an environmental community, alongside agencies, to accelerate actions and build accountability into regulatory systems that will provide the outcomes we seek on a scale that matters.

Environmental regulators and advocates alike got into this work with the same intentions—to make a difference. We too often forget that in the day-to-day struggle of furthering our own ideas and objectives. But we need to regroup around the intended outcomes that we have all sought for so long because they are now, for the first time, truly coming within our reach.

A. The Realities of Our Current Regulatory Environment

There are two serious problems with how we, as an environmental and regulatory community, go about the management of water quality in waterways. First, focusing on procedural legal victories can come at the expense of real outcomes, and second, a systemic frailty exists in our regulatory system.

The historic focus on the procedural litigation among environmental advocates is based on the serious need early in the modern environmental movement to keep bad things from happening. Industrial excess and, at the time, a low level of public awareness of society's impact on the environment required a rigorous response from legislatures and the courts. Certain pieces of this need persist, lest we slide backwards in terms of managing impacts, but increasingly we see that the efforts once developed to keep bad things from happening now keeping good things from happening. We need solid procedures and rigorous enforcement to ensure hard-won environmental gains are not lost. But we must not focus on the procedural legal victories to the detriment of creativity, innovation, and continued progressive action to improve ecosystems. Results matter.

There is also a systemic frailty in our regulatory system. We agree there are aspects of the TMDL as well as DEQ's water quality trading guidance that could be improved. But the reality is, dramatically under-resourced agencies under constant attack for asserted procedural missteps will make mistakes. This is a systemic problem that ongoing litigation exacerbates rather than helps. Correcting this systemic frailty will not be easy in a world where under-resourced agency budgets are unlikely to improve. While science-driven and procedure-adherent steps remain the touchstone for good agency actions, we can still acknowledge that progress can and should be made. New systems and tactics enable us to

simultaneously pursue water quality outcomes with clear-eyed acceptance of these practical realities and the need for flexibility to adjust quantified restoration effort over time to achieve real outcomes.

B. Replacing Reasonable Assurances with Quantified Results

The first step in fixing this system is to fully understand the problem, which must be quantified to be fully understood. Water quality regulators have developed TMDL plans in order to improve impaired waterways, but it is still not possible under these TMDLs to understand what progress has been or is being made toward attainment of water quality standards because there are no consistent metrics for quantifying progress across point and nonpoint sources. This lack of a common language and metric system breeds skepticism as to whether agricultural producers and other nonpoint sources are actually undertaking the actions assigned to them by TMDL local area plans (or equivalent), and creates doubt as to whether the "reasonable assurances" implemented through TMDL management plans are, in fact, reasonable, much less assured. They need to be both.

Scalable quantification tools—including, but not limited to, those utilized in credible water quality trading—now exist. Using these new robust tools and methods, regulators can begin to track progress toward attainment of the long-term water quality health that all involved want. But until these tools are embraced and utilized, we will effectively continue to shoot in the dark at an imagined target, not knowing whether, or by how much, a particular action addresses our pollution problems. In short, we need to replace reasonable assurances with quantified results demonstrating our progress toward water quality standards across all programs—whether public or private—that fund such actions on nonpoint source land. This step will go a long way toward legitimizing, and ultimately identifying, the water quality-based actions that effectively render the greatest amount of relief to nonpoint source impacts.

C. The Freshwater Trust's Approach to Water Quality Trading

As one of the means of achieving our quantified water quality improvement-based mission, The Freshwater Trust works to advance water quality trading where appropriate. Trading has the potential to fund the type of high-quality restoration that rivers need with dollars that would otherwise be spent on compliance solutions that have little or no measurable impact on water quality gains. It also helps to quantify particular benefits as it relates to long-term TMDL goals. Until recently, wastewater utilities and other point sources have only had a limited set of compliance options at their disposal for meeting permit requirements. In the temperature compliance context, these grey infrastructure options include cooling and chilling towers and lagoons that are expensive, depreciating investments that usually must be replaced or substantially upgraded every twenty years. These grey solutions also impose high operating costs and require on-going energy consumption. Although these technological solutions may result in legal compliance, where they fall short is in considering the applied question, "*What does the ecosystem need?*" Does an ecosystem need chillers to cool water discharges a few days out of the year? In most instances, the simple answer is no.

We seek legal compliance solutions *and* quantified ecological benefit. The laws that established compliance obligations were meant to protect aquatic species and people. So, instead of building a solution that simply results in compliance but does not benefit the ecosystem, we want regulated entities to have access to a different option (where regulators have determined that the solution is both

ecologically appropriate to protect designated uses, and will not result in near-field impacts).[2] The Freshwater Trust restores riparian vegetation through a solution that will both quantifiably reduce thermal impacts on the waterways in places where fish actually need cooler water, in addition to providing other water quality benefits (e.g., improvements in habitat, reductions in sediment and nutrient loading, erosion control, carbon sequestration, etc.).

In addition to quantifying the "Net Uplift" at a site (i.e., *environmental uplift generated from restoration* less *pre-project site conditions*) in units that can be understood through a regulatory compliance lens, The Freshwater Trust secures twenty-year leases with landowners, and then implements projects at those sites according to strict quality standards (i.e., species diversity, planting density, native seed usage, etc.). After implementation, these sites are then verified for consistency with quality standards by independent third-party professionals, and the net uplift at the site is converted into uniquely serialized credits that are posted on an online, publicly-available credit registry. For the duration of the credit life, The Freshwater Trust is then responsible for monitoring and maintaining each project site. By converting this high quality restoration work into credits that cannot be double-counted and which must be monitored and maintained over time, we provide the public with the assurance of a credible, transparent system. The rigor of this model has quickly established itself as the most robust of its kind in the United States.

All of the extra steps—which are included in the price paid by the regulated entity—ensure that the ecological restoration actions promised are actually delivered and maintained over time. These on-the-ground performance requirements are unprecedented in conservation and of the kind and rigor needed to achieve outcomes for waterways and aquatic species recovery. Procedural legal wins, perpetually diminished agency resources, and good but vastly scattered restoration efforts continue to not add up for watersheds. Four decades of CWA-focused effort have still left more than half of all U.S. stream miles as impaired.[3] We simply must do better, and Wilsonville is another example how we can start today.

II. Wilsonville's Proposed Permit and Water Quality Trading Program

A. Background on the Wilsonville Wastewater Treatment Plant

The Wilsonville permit modification proposal is the best available environmental solution given the unique circumstances of this facility. At the time of permit issuance in 2010, DEQ and Wilsonville did not know that the City might have a projected thermal exceedance. However, after DEQ issued the permit, Wilsonville discovered that it may in fact have a projected thermal exceedance and raised that issue with DEQ. Wilsonville had contracted with CH2M Hill to "design, build and operate" Wilsonville's wastewater treatment plant, a responsibility that includes meeting the City's compliance obligations for the duration of that contract. After DEQ denied their request for reserve allocation, and then their request for an extension to consider alternative compliance options, CH2M Hill and Wilsonville moved

[2] Water quality trading is not appropriate in all situations. For example, in the temperature trading context, Oregon DEQ will not approve a permit that includes trading if the permittee's thermal discharge would cause fish lethality, impair spawning, or create thermal shock or a migration barrier at a particular outfall point. OAR 340-041-0053(2)(d).

[3] U.S. EPA, National Rivers and Streams Assessment 2008-2009, Draft Report, at xi (2013), *available at* http://water.epa.gov/type/rsl/monitoring/riverssurvey/.

forward with installation of underground infrastructure for three cooling towers in order to address the City's potential and future thermal exceedances beginning in the summer of 2014.

However, given the recent uncertainty generated by the 2012 *NWEA II*[4] settlement on Oregon's "natural condition criteria" (NCC) and related pending TMDL litigation, CH2M Hill and Wilsonville recognized that the City's modeled thermal exceedance might change in the next permit cycle in 2015, thereby rendering the cooling tower solution inadequate and requiring additional capital improvements (i.e., chillers). The flexibility of a compliance grade restoration solution combined with its additional economic and environment benefits led Wilsonville to file this request for a permit modification that would allow for water quality trading. It is in the context of these circumstances that the proposed modification and water quality trading program are the best available solution for the environment. Given the requirements of the City's agreement with CH2M Hill, if DEQ does not approve the permit modification by the end of October 2013, CH2M Hill will have no choice but to move forward with installation of the cooling towers in order to fulfill its contractual obligations to the City.

B. The Proposed Permit Modification and Water Quality Trading Program is a Conservatively-Crafted Compliance Solution that Makes Sense for the River and the City

Oregon DEQ reasonably proposed granting credits to Wilsonville prior to full generation of benefits. This decision is reasonable because Wilsonville is a good candidate for water quality trading. It does not have any reported thermal load limit violations, does not have any near-field issues, and is using trading to address a future exceedance. Moreover, Wilsonville's projected exceedance is based on the simultaneous occurrence of conservative modeling assumptions—most importantly, the use of the biologically-based numeric criteria to calculate the City's excess thermal load amount. Further, Wilsonville's water quality trading solution will begin providing important shade benefits after a short period of time. In addition to being a good candidate for trading, in general, water quality trading solutions do provide more environmental and economic benefits than comparable technological solutions, and are a more flexible compliance alternative in this evolving regulatory environment.

i. Oregon DEQ Reasonably Proposed Granting Credits to Wilsonville Prior to Full Generation of Benefits

1. Wilsonville Does Not Have Any Reported Thermal Load Limit Violations, Does Not Have Any Near-Field Issues, and is Building to Address a Future Exceedance, and so Is a Good Candidate for the Water Quality Trading Solution and Its Longer-Term Benefit Accrual

Trading is appropriate where a permittee does not have reported violations, where water quality trading will not result in near-field impacts to water quality, and ideally where a permittee is building credits to address a future exceedance. All of these conditions exist in Wilsonville. In calculating Wilsonville's excess thermal load relative to its wasteload allocation,[5] CH2M Hill (and DEQ, in assembling the permit and TMDL) relied on a number of conservative factors that when applied to this trading context, suggest that Wilsonville would be a good candidate for a water quality trading solution. First, Wilsonville does

[4] NWEA v. U.S. EPA, 855 F.Supp.2d 1199, 1217–1218 (D. Or. 2012) ("*NWEA II*").
[5] CH2M Hill, Technical Memorandum, City of Wilsonville WWTP Temperature Compliance Evaluation, at 2 (2010) [hereinafter "CH2M Hill Wilsonville Temperature Compliance Evaluation"].

not have any reported thermal load limit violations.[6] Second, Wilsonville does not have any near-field issues related to salmonids.[7] Third, the thermal exceedance Wilsonville is planning for is based on increased effluent flow that is based on projected population growth, which is uncertain to occur in the future.[8] If it reaches future design capacity projections,[9] the 21 million kilocalories/day of thermal credits that Wilsonville is currently seeking is meant to begin addressing that potential future growth (the City's potential future exceedance is estimated at 50 million kilocalories/day).

2. Wilsonville's Projected Exceedance is Based on the Simultaneous Occurrence of Conservative Modeling Assumptions

Wilsonville's projected exceedance is also based on the simultaneous occurrence of conservative modeling assumptions, the most important of which is the fact that Wilsonville's excess thermal load (ETL) amount relies on the biologically-based numeric criteria (BBNC). Large permitted facilities in the Willamette Basin, including Wilsonville, receive an excess thermal load limit in their NPDES permits based on the TMDL wasteload allocations given to point sources to account for allowable human-caused temperature increases in the waterway.[10] Facilities also calculate their ETL; in the Wilsonville's permit, ETL in million kilocalories/day = "*(°C effluent – Willamette River stream standard, 20°C) x (Flow effluent (mgd)) x (Conversion Factor, 3.785)*."[11] If the ETL is larger than its excess thermal load limit (ETLL), then the facility has a thermal exceedance. In calculating the City's projected exceedance, Wilsonville and its engineer planned for this situation on the basis of a number of conservative assumptions.[12] Wilsonville's ETL is based on *maximum* weekly effluent design flow by month.[13] Wilsonville's ETL amount is based on the biologically-based numeric criteria (BBNC).[14] Thus, the City's exceedance assumes the simultaneous occurrence of a number of conservative factors.

3. Wilsonville's Water Quality Trading Solution Will Begin Providing Important Shade Benefits After a Short Period of Time

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[6] U.S. EPA, Discharge Monitoring Report Pollutant Loading Tool, http://cfpub.epa.gov/dmr/index.cfm (accessed Sept. 24, 2013) (search for "Wilsonville wastewater treatment plant").

[7] Oregon Dep't of Envtl. Quality, City of Wilsonville NPDES Permit Evaluation and Fact Sheet, § 4.2 (2010), *available at* http://www.deq.state.or.us/wqpr/4462_2013091000009CS01.PDF (discussing OAR 340-041-0053(d) mixing zone requirements related to spawning impairment, instantaneous lethality, thermal shock, and migration blockage, and determining that the Wilsonville discharge meets the requirements).

[8] *See* CH2M Hill Wilsonville Temperature Compliance Evaluation, at 1, 5 tbl. 2 (using the 4 million per day (mgd) expansion average annual flow condition of 4.48 mgd, which is being undertaken to address population growth estimates in the future).

[9] *Id.* at 14.

[10] *See, e.g.,* Wilsonville NPDES Permit, Schedule A, § 1(c) n. 3. In Oregon, permitted point source facilities are allocated a small allowable temperature increase in their discharge (i.e., the "human use allowance," or "HUA"). OAR 340-041-0028(12)(b). Where a TMDL or other cumulative effects analysis exists, DEQ determines how to allocate the HUA among sources in a way that will ensure that there is not a cumulative anthropogenic heating of surface waters by more than 0.3°C (0.5°F) above the applicable criteria at the point of maximum impact in the waterway. *Id*. 340-041-0028(12)(b)(B).

[11] Wilsonville NPDES Permit, Schedule A, n. 6.

[12] CH2M Hill Wilsonville Temperature Compliance Evaluation, at 5, Tbl. 1 (explaining that for "effluent flow," CH2M Hill chose "max week flow by month").

[13] *Id.* at Tbl 1.

[14] Wilsonville NPDES Permit, Schedule A, n. 6 ("Calculate excess thermal load (ETL) using the following formula … Willamette River stream standard, 20°C …"); OAR 340-041-0028(4)(d) (outlining the temperature standard for migration corridors).

Wilsonville's water quality trading solution will begin providing important shade benefits after only a short period of time. Conventional technology solutions take months or a few years to build once purchased. The full benefits of shade take longer to accrue, although native vegetation planted as part of the program actually grows into tall, shade-producing trees much quicker than one might expect. For example, a growth curve[15] for Black Cottonwood (*Populus trichocarpa*)—a native species regularly planted by riparian restoration practitioners in Oregon that has a growth pattern representative of riparian plantings in the area—shows that with average regional conditions, Black Cottonwood starts grow to be 9 feet tall after just one year; 23 feet tall after five years; 43 feet tall after ten years; and 81 feet tall after twenty years.[16] DEQ gives credit for full shade benefit accrual at the time of purchase, but the fast rate of tree growth, plus DEQ's requirement of a 2:1 trading ratio, minimizes the time lag between credit generation and shade accrual.[17]

ii. Water Quality Trading Solutions Provide More Environmental and Economic Benefits, and Are a More Flexible Compliance Alternative In This Evolving Regulatory Environment

When compared to technological solutions that have traditionally been installed at treatment facilities, the water quality trading solution proposed by DEQ has far more ecological benefits. With a water quality trading solution, the underlying investment will *appreciate* over time into a self-sustaining solution.[18] As DEQ notes, the water quality trading solution also provides additional benefits for the watershed, including creation of wildlife habitat and energy use savings.[19] The water quality trading solution also creates ancillary ecological benefits for the watershed, including functional habitat for macro-invertebrate life, year-round shading of the waterbody, nutrient-input avoidance, floodplain restoration, and erosion control.[20]

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[15] Growth curves (a.k.a. site index curves) are established through observation and measurement of species growth, over time, given specific site conditions. *See* U.S. Forest Service Pacific Northwest Research Station, PNW-RN-533, Site Index Equations and Mean Annual Increment Equations for Pacific Northwest Research Station Forest Inventory and Analysis Inventories, 1985-2001 (2002).

[16] E.B. Peterson et al., B.C. Ministry of Forests, Black Cottonwood and Balsam Poplar Managers' Handbook for British Columbia, Forestry Canada, at 46 (1996), *available at* http://www.for.gov.bc.ca/hfd/pubs/docs/Frr/Frr250.htm.

[17] Public Notice, Oregon. Dep't of Envtl. Quality, DEQ requests comments on proposed modification of City of Wilsonville water quality permit, File #97952, at 6 (Aug. 4, 2013), *available at* http://www.deq.state.or.us/news/publicnotices/uploaded/130806_4740_WilsonvilleModPNdocs.pdf (proposing to modify Schedule D, § 9(c)(1) of the permit) [hereinafter "DEQ Request for Wilsonville Comments].

[18] The solution is "self-sustaining" because when a mature tree naturally falls (itself an ecosystem-benefiting event), riparian vegetation and/or another tree will naturally grow in its place, thus allowing the solution to function even in the absence of human intervention—something that is not possible for built solutions that require maintenance to function over time.

[19] DEQ Request for Wilsonville Comments, at 1.

[20] *See* M.D. Tomer & M.A. Locke, The Challenge of Documenting Water Quality Benefits of Conservation Practices: A Review of USDA-ARS's Conservation Effects Assessment Project Watershed Studies, 64 Water Science & Technology 300, 303 (2011) (noting nutrient and erosion benefits of buffers); Oregon Dep't of Envtl. Quality, Water Quality Trading IMD, at 20 (§ 3.1) (2009), *available at* http://www.deq.state.or.us/wq/pubs/imds/wqtrading.pdf (noting floodplain restoration benefits from trading) [hereinafter "DEQ Water Quality Trading IMD"]; Scott W. Miller et al., Quantifying Macroinvertebrate Responses to In-Stream Habitat Restoration: Applications of Meta-Analysis to River Restoration, 18 Restoration Ecology 8, 8 (2010) (noting benefits of heterogeneous riparian habitat).

Though The Freshwater Trust focuses first and foremost on providing solutions that watersheds need, we recognize that municipalities, as a fiduciary for their ratepayers, also appreciate the significant local economic gains that water quality trading solutions provide gains that a technology-based compliance solution may not. Riparian plantings are made possible through a local workforce (excavators, equipment operators, irrigation equipment suppliers, general contractors, and riparian restoration professionals), and plant stock and supplies are purchased from local nurseries. In fact, typically 80 cents of every dollar spent on restoration stays in the local economy, and every $1 million spent on restoration creates 15–20 jobs.[21] Moreover, when The Freshwater Trust plants riparian vegetation on private land, landowners are compensated with an annual rental fee that can help them continue to make ends and, in some cases, avoid selling their land into development. Thus, the long-term economic activity associated with performing riparian restoration at scale—jobs created, economic expenditures, and landowner fees—is measurable and does not similarly result from building grey infrastructure solutions.

In proposing this modification, DEQ recognized the environmental superiority of the riparian restoration solution while also appreciating its positive ancillary economic benefits. Integrating environmental and economic factors in a way that leverages the strengths of each while driving compliance should be lauded; regulatory agencies rarely take such progressive action despite an increasingly integrated world that demands it.

Trading is also the most flexible option, the most prudent investment of ratepayer money, and therefore makes the most sense in an evolving regulatory environment. If the City's exceedance increases as a result of regulatory changes (i.e., new standards, revised or vacated TMDLs), it can simply buy more quantified compliance-grade credits. Cooling towers, the City's other viable option, can only function within limited temperature ranges. Therefore, if the City's exceedance increases, its cooling tower may need to be replaced with more environmentally and economically costly chillers.[22] On the other hand, a trading solution can scale as needed simply through completion of additional quantified restoration.

C. The Proposed Permit Modification—which is Limited to Schedules B and D, and the Water Quality Trading Program, Attachment A—is Consistent with Existing Law

Wilsonville's proposed modification is consistent with existing law, despite an uncertain regulatory environment. A modification is the appropriate action to allow the use of water quality trading to meet a projected exceedance under an existing permit.[23] The proposed permit modification suggests three

[21] M. Nielsen-Pincus & C. Moseley, Institute for a Sustainable Environment, University of Oregon, Economic and Employment Impacts of Forest and Watershed Restoration in Oregon (2010), *available at* http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/WP24.pdf.

[22] In a cooling tower, evaporative cooling occurs where the evaporation of water into the surrounding air cools the water. The potential for evaporative cooling is limited by the wet-bulb temperature (which is the lowest possible temperature that a perfectly efficient evaporative cooler can produce), and so cooling towers will not work if a facility needs to cool its discharge below the wet-bulb temperature at that location. *See* West Yost Associates, City of Medford Regional Water Reclamation Facility: Facilities Plan, § 7.2.2 (2012). On the other hand, effluent "chillers" are mechanical refrigeration units that pump water through vapor-compression or absorption-refrigeration cycles. Chillers are much more effective at cooling, and are not limited by wet-bulb temperature constraints, but are also very energy intensive, and may require the use of toxic refrigerants. *See id*. § 7.2.3.

[23] OAR 340-045-0055(2) ("The procedures for … NPDES permits apply to *any modification requested by the permittee* or initiated by the Department excluding modifications that are considered minor.") (emphasis added).

changes to the permit itself—two monitoring and reporting requirements in Schedule B, and the addition of trading program requirements into Schedule D—as well as Attachment A, which describes the "Wilsonville Restoration Approach for Temperature Compliance."[24] Only *these* portions of the permit are open for review in this permit modification. Moreover, the permit as proposed for modification is consistent with all relevant existing laws—including the Willamette Basin TMDL, applicable water quality standards, state and local regulations, and those determining whether there is room for trading. No doubt there will be additional changes to other sections of the permit when it comes up for renewal in 2015, but the scope of this modification is limited to those actions necessary to address Wilsonville's projected potential exceedance next summer.[25]

i. Only Schedules B and D, and the Water Quality Trading Attachment are Open for Modification; Standard Changes Do Not Trigger Revocation/Reissuance

Proposed modification of one part of the permit does not mean that other conditions in the permit are also reopened for review. Both federal and state law are clear that only those NPDES permit conditions proposed for modification are reopened, while all unmodified aspects remain in effect for the duration of the permit.[26] Nor is it appropriate for entities to request public hearings to reopen other conditions in the permit that do not affect the condition being modified.[27]

A permittee may request modification of a permit because "the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued,"[28] but that is not the basis for Wilsonville's request or the scope of the proposed modification. EPA's disapproval of Oregon's natural conditions criteria ("NCC") on August 8, 2013, could be considered an "amended standard or regulation." However, even if a court has properly remanded a standard, the *permittee* must file a request to modify its permit within 90 days of judicial remand.[29] Wilsonville did not file such a request. Similarly, because *Wilsonville* did not request a

[24] DEQ Request for Wilsonville Comments, at 4–7, 13–18.

[25] DEQ Request for Wilsonville Comments, at 1.

[26] 40 C.F.R. § 124.5(a), (c)(2) ("Applicable to State programs, see §§ 123.25 (NPDES) … In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit."); 40 C.F.R. § 122.62 ("When a permit is modified, only the conditions subject to modification are reopened."); OAR 340-045-0055(2)(b) ("Only the conditions subject to modification are reopened during this process."); Texas Mun. Power Agency v. U.S. EPA, 799 F.2d 173, 175 (5th Cir. 1986) ("[M]odification of an existing permit affects only the meaning and the scope of those provisions modified").

[27] Costle v. Pacific Legal Foundation, 586 F.2d 650, 655 (9th Cir. 1978), *rev'd of other grounds*, 445 U.S. 198, 217 (1980) (holding that despite the NPDES permit regulatory structure orientation toward public participation, "respondents may not reopen consideration of substantive conditions contained within the 1975 permit through hearing requests relating to a proposed permit modification that did not even purport to affect those conditions.").

[28] 40 C.F.R. § 122.62(a)(3) ("The following are causes for modification but not revocation and reissuance of permits except when the permittee requests or agrees … The standards … on which the permit was based have been changed by promulgation of amended standards … or by judicial decision after the permit was issued.").

[29] 40 C.F.R. § 122.62(a)(3)(ii). In 2012, the U.S. District Court for the District of Oregon vacated Oregon's "natural conditions criteria" (NCC)—a component of Oregon's water quality standards. *NWEA II*, 855 F.Supp.2d at 1217–1218. Pursuant to the remedies settlement in the case, EPA formally disapproved of the NCC on August 8, 2013. Letter from Daniel Opalski, Office of Water and Watersheds, EPA Region 10, to Gregory Aldrich, Water Quality Programs Administrator, Oregon Dep't of Envtl. Quality (Aug. 8, 2013).

permit modification based on EPA's August 8, 2013, disapproval of the NCC, there is no basis for modifying its permit on this basis. [30]

ii. Wilsonville's Water Quality Trading Solution is Consistent with Oregon Regulations

The water quality trading solution is consistent with Oregon regulations on water quality trading. Oregon regulations state that "[a]nthropogenic sources may engage in thermal water quality trading in whole or in part to offset its temperature discharge, so long as the trade results in at least a net thermal loading decrease in anthropogenic warming of the water body, and does not adversely affect a threatened or endangered species."[31] As noted above, this trade will result in a net thermal loading decrease due to the 2:1 trading ratio, the conservative, projected, future nature of the exceedance, and the ancillary benefits produced from the water quality trading solution.[32] Furthermore, Wilsonville's thermal discharge does not create near-field impacts that would adversely affect endangered species.[33]

iii. Wilsonville's Future Thermal Exceedance Amount, which will be Addressed via Water Quality Trading, is Consistent with the Still-Valid Willamette Basin Temperature TMDL, and Current Water Quality Standards

Faced with the choice of addressing its future thermal exceedance with either a cooling tower or water quality trading, Wilsonville requested a modification of its permit to meet its future thermal exceedance via trading—a decision that should be applauded. This modification coincides with the regulatory uncertainty generated by *NWEA II*, [34] EPA's disapproval of the NCC, and pending litigation challenging the validity of TMDLs in *NWEA III*. [35] If Wilsonville is forced to wait until the TMDL issues in *NWEA III* are resolved, it will be too late to implement water quality trading projects that will meet its projected exceedance in summer 2014. The City will simply have to build the cooling towers and forgo any potential to smoothly adapt to later, increasing regulatory requirements. Nonetheless, Wilsonville's permit is still consistent with the Willamette Basin temperature TMDL, and is as consistent as any permit can be with currently in-flux water quality standards in Oregon.

The temperature component of Wilsonville's permit is consistent with the still-valid Willamette Basin temperature TMDL. DEQ issued the Willamette Basin temperature TMDL as a final and effective state administrative order on September 21, 2006.[36] DEQ then submitted the TMDL to EPA Region 10 for

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[30] "*Permits may be modified during their terms for this cause only as follows*: (i) For *promulgation* of *amended standards* or regulations, when: (A) The permit condition requested to be modified was based on a promulgated effluent limitation guideline, EPA approved or promulgated water quality standards, or the Secondary Treatment Regulations under part 133; *and* (B) EPA has revised, withdrawn, or modified that portion of the regulation or effluent limitation guideline on which the permit condition was based, or has approved a State action with regard to a water quality standard on which the permit condition was based; *and* (C) *A permittee requests modification in accordance with § 124.5 within ninety (90) days after Federal Register notice of the action on which the request is based*." 40 C.F.R. § 122.62(a)(3)(i).

[31] OAR 340-041-0028(12)(f).

[32] *See supra* Sections II(B)(i)(1)-(3). II(B)(ii).

[33] *See supra* note 7 and accompanying text.

[34] *NWEA II*, 855 F.Supp.2d 1199 (D. Or. 2012).

[35] NWEA v. U.S. EPA, No. 12-cv-01751 (D. Or. filed Sept. 27, 2012) ("*NWEA III*").

[36] OAR 340-043-0060 (TMDL orders are effective and final on the date signed by the DEQ Director); Memorandum from Lauri Aunan, Water Quality Admin'r, Oregon Dep't of Envtl. Quality, to Willamette Basin TMDL File (Sept. 21, 2006), *available at* http://www.deq.state.or.us/wq/tmdls/docs/willamettebasin/willamette/ordermemo.pdf.

approval pursuant to the requirements of the Clean Water Act.[37] EPA Region 10 approved the Willamette Basin temperature TMDL on September 29, 2006.[38] In 2012, the U.S. District Court for the District of Oregon vacated Oregon's NCC in *NWEA II*. On the heels of this lawsuit, NWEA filed another lawsuit—*NWEA III*—challenging all Oregon temperature TMDLs that relied on the NCC provision. *NWEA III* remains unresolved. Nonetheless, the Willamette Basin TMDL remains applicable as both a matter of state law (enforceable order), and federal law (EPA-approved TMDL under the CWA). Therefore, despite uncertainty stemming from the now-resolved temperature standards litigation, and the ongoing TMDL litigation in Oregon, the proposed modification must be consistent with the Willamette Basin TMDL, which remains valid until it is formally disapproved, withdrawn, vacated, or otherwise ceases to exist.

EPA regulations require NPDES permits to be "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA[.]"[39] The Willamette Basin TMDL provides Wilsonville with river flow-based and temperature-based wasteload allocation (WLA) options based on the dynamics of the river.[40] The smallest wasteload allocation that Wilsonville can receive, based on 7Q10 conditions, is between 36–39 million kilocalories/day.[41] Consistent with the TMDL, the City's permit imposes an excess thermal load limit (ETLL) of 39 million kilocalories/day (a rolling 7-day average of from June 1 – September 30 of each year).[42] Wilsonville's excess thermal load limit is therefore consistent with the Willamette Basin temperature TMDL. In addition to the fact that DEQ cannot amend Wilsonville's ETLL at this point because it is not being reopened,[43] it is also unclear how DEQ will be able to adjust wasteload allocations (and ETLLs based on WLAs) in the future based on the outcome in *NWEA II* and EPA's disapproval of the NCC. Ultimately, the CWA requires that permits are designed to control pollutants with the potential to cause or contribute to an excursion above state water quality standards.[44] Wilsonville will be able to control its thermal exceedance via its proposed water quality trading program, which is currently designed to account for the biologically-based numeric criteria (BBNC) in the City's ETL.[45]

The question is thus whether Wilsonville's ETLL is valid, and if not, what can be done *now* to remedy the issue aside from simply not issuing a permit modification, and defaulting to a cooling tower. The Freshwater Trust believes that even though DEQ used "natural thermal potential" (NTP) as an assumption in developing TMDL wasteload allocations, that the use of NTP here was and is within the agency's discretion to use for this modeling exercise. DEQ has the discretion to divide up the human use allowance (HUA) such that it does not cumulatively warm the waterway by more than 0.3°C at a point of

[37] States must submit TMDLs to EPA for approval or disapproval. *See* 33 U.S.C. § 1313(d)(2).
[38] U.S. Envtl. Protection Agency, EPA Region 10 TMDLs, EPA Fiscal Year 2006, http://ofmpub.epa.gov/waters10/attains_impaired_waters.tmdls?p_region=10&p_fiscal_year=2006.
[39] 40 C.F.R. § 122.44(d)(1)(vii)(B).
[40] Oregon Dep't of Envtl. Quality, Willamette Basin TMDL, at 4-119 (2006), *available at* http://www.deq.state.or.us/wq/tmdls/docs/willamettebasin/willamette/chpt4temp.pdf.
[41] Willamette Basin TMDL, at 4-119. This is the WLA that Wilsonville received in the TMDL. *Id.* at 4-69, Tbl. 4.15.
[42] Wilsonville NPDES Permit, Schedule A, § 1(c), n. 3. The ETLL value changes depending on the time of year. *Id*.
[43] *See supra* Section II(C)(i).
[44] 40 C.F.R. § 122.44(d)(1)(i) ("Limitations must control all pollutants or pollutant parameters … which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard[.]").
[45] *ETL in million kilocalories/day = (°C effluent – Willamette River stream standard, 20°C) x (Flow effluent (mgd)) x (Conversion Factor, 3.785)*. Wilsonville NPDES Permit, Schedule A, n. 6. 20°C is the BBNC value applicable to migration corridors. OAR 340-041-0028(4)(d).

maximum impact.[46] In the Willamette Basin TMDL, at the point of maximum impact, DEQ assigned a default of 0.23°C of the HUA to point sources, 0.035°C to nonpoint sources, and 0.035°C to reserve capacity.[47] As noted in Table 4.12 of the TMDL, DEQ has the discretion to divide the HUA differently in different reaches.[48] This discretion clearly reflects the agency's ability to adjust its many modeling assumptions. Thus, even though it used NTP as one model input among many, it has the discretion to change other assumptions, and so its use of NTP as a modeling input—and *not* as a water quality standard—is within its discretion. Therefore, until and unless TMDLs and wasteload allocations are revisited, the Wilsonville permit—and those like it—are consistent with the BBNC.

iv. The Willamette Basin Temperature TMDL and Other Regulatory Requirements Currently Provide Room for Trading

The 2003 EPA Trading Policy requires that nonpoint sources meet "baseline" requirements prior to trading. EPA has stated that "the baseline for nonpoint sources should be the level of pollutant load associated with existing land uses and management practices that comply with applicable state, local or tribal regulations."[49] Put another way, EPA has also stated that baseline is equal to "the pollutant control requirements that apply to a buyer and seller in the absence of trading."[50] In basic trading terms, the question is really how many credits generated from a nonpoint source can be sold. The short answer is: the "Net Uplift" from a site (i.e., *post-project performance – pre-project performance*) is reduced by whatever is required by "Regulatory Baseline" requirements (i.e., applicable statutes or regulations) and/or the TMDL.[51] For Wilsonville, no Regulatory Baseline requirements apply, nor does the TMDL impose any requirements on the City right now. Therefore, all Net Uplift from a project can be converted into credits.

1. No Regulations Create Regulatory Baseline Requirements

Regulatory Baseline requirements exist where there are affirmative restoration obligations or non-disturbance regulations that require a site to be in a condition prior to project implementation that would be the final condition after credit-generating restoration work. Neither the Oregon Department of Agriculture management plans or area rules,[52] nor Linn or Lane County regulations[53] impose any

[46] *See* OAR 340-041-0028(12)(b)(B).
[47] Willamette Basin TMDL, at 4-63, Tbl. 4.12.
[48] *See id.*
[49] U.S. EPA, Water Quality Trading Toolkit for Permit Writers, at 5 (2007, updated 2009) [hereinafter "2007 EPA Trading Toolkit"].
[50] *Id.* at 8.
[51] The distinction between these types of Baseline is rooted in the EPA Trading Policy: "the baselines for generating pollution reduction credits should be derived from and consistent with water quality standards. The term pollution reduction credits ('credits'), as used in this policy, means pollutant reductions greater than *those required by a regulatory requirement or established under a TMDL*." U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1610 (Jan. 13, 2003) (emphasis added) [hereinafter "2003 EPA Trading Policy"].
[52] Restoration sites are likely to be located in either the South Santiam or Southern Willamette Valley ODA agricultural water quality management program areas. *See* Or. Dep't of Agric., Agricultural water quality management areas (AgWQMAs), http://www.oregon.gov/ODA/NRD/pages/water_mgmt_area_map.aspx. In the Southern Willamette AgWQMA, ODA regulations state that "[c]ompliance with [these] rules is expected to aid in the achievement of applicable water quality standards in the Southern Willamette Valley [AgWQMA]." OAR 603-095-2100(2). "By January 1, 2004, agricultural management shall *allow establishment and maintenance* of vegetation along perennial streams consistent with the capability of the site to provide riparian functions

riparian buffer width, tree type or height, or density obligations on the riparian land upon which riparian restoration is likely to occur. As contrasted with Oregon forestry regulations,[54] these passive, non-disturbance regulations therefore only require that land be left alone so that vegetation can be established, and are not affirmative riparian restoration obligations.

2. The Willamette Basin TMDL, as Currently Implemented, Does Not Impose any Additional TMDL Baseline Requirements For Current Credit-Generating Projects

In a basin where there is no TMDL, EPA is clear that baseline is the applicable state, local and tribal regulations.[55] Where there is a TMDL, the agency may impose baseline requirements in addition to applicable regulations on individual project sites. Oregon TMDLs do not clearly impose any baseline requirements in temperature TMDLs. However, careful examination of four key issues related to TMDL construction and implementation clarifies what the TMDL does require (and does not), and that currently there is ample room for trading in Oregon.

The first key issue is that TMDL load allocations (LAs) have been interpreted in various ways, especially as it relates to trading. LAs represent "[t]he portion of a receiving water's [TMDL] loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources[.]"[56] The regulatory definition of load *allocations* can be interpreted in two conflicting ways: 1) as "Full Excess Load"; and 2) as an "Allowance." The Full Excess Load approach views LAs as an assignment of responsibility to nonpoint sources to remedy *all* excess loading *prior* to trading. Use of this interpretation would significantly limit the room for trading in many TMDLs. The Allowance approach views load *allocations* as an allowable amount of pollution by nonpoint sources, as is the case with wasteload allocations that are *given* to point sources. This second approach is consistent with the

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necessary to help moderate solar heating and for streambanks to withstand flows resulting from a 25-year, 24-hour storm event." *Id.* 603-095-2140(3). Similar rules exist for the South Santiam AgWQMA. *Id.* 603-095-2400(2); 603-095-2440(2) ("By January 1, 2003, agricultural activities along perennial streams shall allow for the *establishment and maintenance of riparian vegetation* consistent with site capability that promotes infiltration of overland flows, moderation of solar heating, and streambank stability … Minimal breaks in shade vegetation for essential management activities are considered appropriate."). The TMDL implementation plans for these AgWQMAs likewise call just for non-disturbance. *See* ODA, South Santiam Agricultural Water Quality Management Area Plan (2012), *available at* http://www.oregon.gov/ODA/NRD/docs/pdf/plans/s_santiam_plan.pdf; ODA, Southern Willamette Valley Agricultural Water Quality Management Area Plan (2012 updated), *available at* http://www.oregon.gov/ODA/NRD/docs/pdf/plans/s_willamette_2012_plan.docx.pdf.

[53] Lane County does not currently impose any regulatory baseline requirements. The code discusses riparian setback requirements for various land use types, but these regulations relate to development restrictions. *See* Lane County Code §§ 16.210 – 16.216. Removal of vegetation in setback areas can occur if done in conjunction with riparian enhancement projects. *Id.* § 16.253. Similarly, Linn County's code is devoid of regulatory baseline requirements.

[54] *See* Or. Admin. R. 629-640-0000(2). On fish bearing streams, operators "shall retain" all understory vegetation within 10 feet of the high water level, all trees within 20 feet of the high water level, and all trees leaning over the channel. *Id.* 629-640-0100(2). Moreover, operators must retain downed wood in riparian management areas, at least 40 live conifer trees per 1000 trees, and trees/snags at least six inches or greater in DBH. *Id.* 629-640-0100(3)-(6). Thus, riparian restoration work on these lands would be to remedy a failure to retain the required types of vegetation to specifications, and so would not be creditable.

[55] 2007 EPA Trading Toolkit, at 8.

[56] 40 C.F.R. § 130.2(g).

commonly understood meaning of "allocations,"[57] and the logic underlying the CWA and its regulations.[58] Furthermore, DEQ has the discretion to interpret LAs in this way.[59]

The next key issue is the misperception that baseline *is equal to* LAs. The 2003 EPA Trading policy states that "where a TMDL has been approved or established by EPA, [… the] nonpoint source load allocation *would establish* the baselines for generating credits."[60] Similarly, and more to the point, the more recent EPA Permit Writer's Toolkit states that: "baseline for a nonpoint *can be derived* from a load allocation (LA) established under a total maximum daily load (TMDL)."[61] These guiding documents from EPA do not call for baseline to be equal to LAs. Rather, baseline "*can* be derived from" the amount of load that is given to a nonpoint source (or category) in the LAs of a TMDL.

Much of this aforementioned confusion stems from the lack of clear time horizons for achieving TMDL objectives. The federal CWA does not require that TMDL goals be attained by a particular point in time. The only statutory requirement is that TMDLs "shall be established at a level necessary to implement the applicable water quality standards."[62] Therefore, unless established pursuant to state mechanisms,[63] TMDLs do not include water quality standard attainment deadlines. Because TMDLs are long-term documents meant to outline an ideal set of modeled circumstances that once achieved *at some point in the future*, will result in attainment of water quality standards, the ideal modeled TMDL scenario should not be thought of as a pre-requisite for trading at each site. Therefore, even though the Willamette Basin TMDL identifies an LA goal of "system potential solar radiation,"[64] the open-ended

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[57] Meriam Webster Dictionary, 3d. ed. (listing "allow" as a synonym for "allocate").

[58] As articulated in the CWA and its implementing regulations: *TMDL = (WLAs + LAs [including Natural Background] + Margin of Safety)*. 40 C.F.R. § 130.2(i); 33 U.S.C. § 1313(d)(1)(C). The TMDL is a mechanism for getting a waterbody to its "Loading Capacity," which is defined as the "[t]he greatest amount of loading that a water can receive without violating water quality standards." 40 C.F.R. § 130.2(f). "Excess Load" is therefore the amount of load above the Loading Capacity that is causing the water to violate water quality standards, or more simply put, *Current Conditions Requiring a TMDL = TMDL + Excess Load*. Thus, *Current Conditions Requiring a TMDL – Excess Load = TMDL*, meaning that Excess Load can thus not be part of the LAs (which is a part of the TMDL equation) because it is on the other side of the "=" sign. In most current temperature TMDLs, LAs are conflated with the responsibility attributed to nonpoint sources to remedy Excess Load. In effect, the above equation is often expressed this way: *Current Conditions Requiring a TMDL = TMDL, which is expressed as (WLAs + [LAs = Excess] + Natural Background + Margin of Safety)*. According to the allowance approach, Excess Load must be <u>distinct</u> from the TMDL Loading Capacity amount, and should therefore not be part of the TMDL LAs. The ramification of this conclusion is that LAs are not equal to Excess Load, which is essentially the gap between Current Conditions Requiring a TMDL, and optimal future conditions when a TMDL is fully effective. This therefore means that TMDL goals meant to bridge that gap should not be expected to occur right away and as a prerequisite to trading.

[59] Because a TMDL is a "highly technical, specialized interstitial matter that Congress does not often decide itself, but delegates to specialized agencies to decide[,]"EPA and implementing state agencies have great discretion in terms of interpreting the CWA and its regulations. *See* Zuni Pub. Sch. Dist. v. Dep't of Educ., 550 U.S. 81, 90 (2007).

[60] 2003 EPA Trading Policy, 68 Fed. Reg. at 1610 (emphasis added).

[61] 2007 EPA Trading Toolkit, at 8 (emphasis added).

[62] 33 U.S.C. § 1313(d).

[63] *See, e.g.,* RCW 90.48.080 ("It shall be unlawful for any person to throw, drain, run, or otherwise discharge into *any of the waters of this state*) (emphasis added). Washington Ecology authority to regulate nonpoint sources under this law was recently upheld by the state Supreme Court. Lemire v. Washington, No. 87703-3 (2013).

[64] "Load Allocations (Nonpoint Sources): System potential solar radiation is the targeted load allocation for nonpoint source activities in the Willamette Basin … Surrogate measures are used throughout the temperature TMDL. Effective shade targets translate nonpoint source solar radiation loads into streamside vegetation objectives." Willamette Basin TMDL, at 4-4.

nature of the TMDL provides the flexibility to meet that goal in the future, but not as a part of baseline for all trading in the present.

The final, and most important part of the TMDL baseline discussion is the question as to what part of the TMDL creates obligations. Although EPA attempted to promulgate regulations related to TMDL implementation, those regulations were never finalized.[65] Around the same time, the Ninth Circuit confirmed that "TMDLs are primarily informational tools that allow the states to proceed from the identification of waters requiring additional planning to the required plans … *States must implement TMDLs only to the extent that they seek to avoid losing federal grant money; there is no pertinent statutory requirement otherwise requiring implementation of § 303 plans or providing for their enforcement*."[66]

Oregon DEQ relies on a series of "designated management agencies" (DMAs) to implement TMDL management strategies and sector-specific implementation plans.[67] The requirements contained in the DMA implementation plans are the translation of overall TMDL goals into discrete actions under the jurisdictional control of a particular DMA. In its Trading IMD, DEQ states that the "[p]rovisions of the TMDL Implementation Plans for designated management agencies would be the baseline for nonpoint sources."[68] When DEQ does not object to DMA plans as insufficient to implement TMDLs at this particular juncture in the long-term water quality improvement trajectory of the TMDL,[69] its determination is afforded considerable deference.[70]

DEQ has yet to object to any TMDL implementation plans as insufficient. Thus, if these implementation plans, as well as state and local regulations, do not currently require any actions on particular types of land, baseline at these project sites is currently equal to only the Net Uplift calculated by subtracting pre-project site conditions (i.e., the amount of solar loading blocked by existing vegetation) from the post-project site conditions (i.e., the amount of solar loading blocked as a result of restoration work).

D. Areas in Need of Clarification in the Wilsonville Permit

[65] In 1999, EPA proposed a new TMDL rule that included provisions related to implementation plans, reasonable assurance requirements, implementation schedules, etc., and published it as a final rule in 2000. *See* 64 Fed. Reg. 46012 (Aug. 23, 1999); *see* 65 Fed. Reg. 43586 (July 13, 2000). EPA withdrew the rule in 2003. 68 Fed. Reg. 13608 (March 19, 2003).

[66] Pronsolino v. Nastri, 291 F.3d 1123, 1129, 1140 (9th Cir. 2002) (emphasis added).

[67] OAR 340-042-0030 (DMAs are "a federal, state or local governmental agency that has legal authority over a sector or source contributing pollutants, and is identified as such by [DEQ] in a TMDL.").

[68] DEQ Water Quality Trading IMD, at 20 (§ 3.1).

[69] With respect to DMA implementation plans from the Oregon Department of Agriculture (ODA), "[i]f [DEQ] determines that the plan and rules are not adequate to implement the load allocation, [DEQ] will provide [ODA] with comments on what would be sufficient to meet TMDL load allocations." OAR 340-042-0080(3). The same type of mechanism exists for Oregon DEQ with respect to land governed by the Oregon Forest Practices Act. OAR 340-042-0080(2) ("In areas where a TMDL has been approved, site specific rules under the Forest Practices Act rules will need to be revised if the department determines that the generally applicable Forest Practices Act rules are not adequate to implement the TMDL load allocations.").

[70] "We defer to an agency's interpretation of its own rule if that interpretation is plausible and not inconsistent with the text of the rule, its context, or some other source of law." Tualatin Riverkeepers v. Oregon Dep't of Envtl. Quality, 235 Or. App. 132, 144, 230 P.3d 559 (2010).

There are several specific provisions of the permit modification that could benefit from some additional clarification from DEQ:

- **Modification #1, Schedule B, Condition 1.b on page 6 of permit**: In describing the "Item or Parameter" for temperature, DEQ's proposed modification #1 states "Temperature, Rolling 7-day Average of Daily Maximums (*million kcal/day*)." The correct unit in parentheses should be (°C), and not (million kcal/day). Moreover, under "Type of Sample," modification #1 states "Calculation, per the procedures in the approved trading program." It is unclear which procedures to which DEQ is referring.
- **Modification #3, Section 9.b(1)a on page 10 of permit:** this section states that credits are generated from activities "not already required by statute or rule." It would be helpful for DEQ to reference the types of sources of information that form the baseline for the trade, including federal, state, local regulations and rules, and existing permit requirements; the agricultural area plans, etc. Listing all the specific rules that apply to activities on a particular parcel of land is not practicable given that they will vary depending on the location, zoning, current uses on the site, or other parameters (e.g., forest land has different requirements than agricultural land, and county agricultural regulations may further vary). However, it will be helpful to clarify what types of regulations should be reviewed to determine baseline for trading.
- **Modification #3, Section 9.c(1)**: This section describes the trading ratio as follows: "Thermal load credits may be generated from ecologically appropriate riparian shading projects with a trading ratio of 2:1 (that is, to generate credit for one unit of thermal load, two units of solar radiation must be blocked by the planting)[.]" This explanation suggests that the trading ratio is part of a single credit (i.e., that one credit is equal to two kilocalories/day). Although earlier trading permits have included this language, The Freshwater Trust suggests that DEQ amend this language to the following: "Thermal load credits may be generated from ecologically appropriate riparian shading projects. To account for DEQ's 2:1 trading ratio, the facility will need to hold twice as many credits as its thermal exceedance in order to be in compliance." This correction will allow for the application of differing trading ratios, and decouples the credit quantification process from the permit compliance obligation. Decoupling provides local trading programs with greater flexibility to target actions where they are needed most. This change also needs to be made in three other places within the permit and accompanying materials:
    - **Proposed NPDES Permit Modification Evaluation and Overview, *What are the specific requirements for generating thermal credits from riparian restoration efforts?***: The Freshwater Trust suggests that the same change suggested for Modification #3, Section 9.c(1) also be made here.
    - **Proposed NPDES Permit Modification Evaluation and Overview, *How are thermal credits calculated?***: The equation currently states "*Thermal Credits = (SAstream x ΔES x IR) / Trading Ratio*." To be consistent with the removal of the trading ratio from the credit calculation process, The Freshwater Trust suggests that this equation remove the trading ratio such that it would read: 1) *Thermal Exceedance = (SAstream x ΔES x IR)*.
    - **Modification #1, Schedule B, Condition 1.b on page 6 of permit**: In conjunction with these two changes, the following equation should be changed. Currently, the equation states "*Excess Thermal Load (ETL) = Qe(Te – Tr)Cf – Thermal Credits million Kcals/day*." This equation should now read: "*Excess Thermal Load (ETL) = Qe(Te – Tr)Cf – (Thermal Exceedance, million Kcals/day x TR)*." "TR" is the trading ratio and should therefore be added as a variable to the list of variables after the equation.
- **Modification #3, Section 9.c(2)**: This section states that those activities that occurred after the adoption of the Willamette Basin TMDL on September 29, 2006, are potentially eligible for

credit generation. The Oregon IMD currently states that where trades occur in a TMDL area, "DEQ will give credit for actions started after the initial TMDL is issued by DEQ."[71] Setting the date to TMDL issuance makes sense because it is the TMDL or TMDL-like analysis that sets the relationship of nonpoint sources and point sources, and the baseline for trading (it would be helpful for DEQ to provide this explanation). However, while we know of no plans for Wilsonville to seek credit for past activities, we recognize that it is appropriate to acknowledge in the permit that previous actions could be creditable only if DEQ also includes the other specific requirements for those actions to be credible. In other words, the requirements, that when met, demonstrate that an action completed prior to the permit modification a) was not otherwise required by law (and therefore an eligible to generate a credit), and b) provides quantified, documented uplift from the conditions on the site prior to project implementation.

- **Attachment A, #2**: Change "approved offset trading area" to "approved credit generation trading area." The term "offset" is potentially confusing since it is often a term associated with mitigating new discharge impacts in an anti-degradation context,[72] as opposed to addressing the impacts of existing discharges.

E. Suggested Improvements for Water Quality Trading Programs and Permits

The Freshwater Trust believes that the City of Wilsonville's NPDES permit, as proposed for modification by DEQ, is consistent with existing laws, and is the compliance option that makes the most sense for the river and its fish, especially given the limited time-frame in which the City must implement a solution for its projected exceedance and the currently evolving regulatory environment.

In addition, The Freshwater Trust encourages DEQ to incorporate the following improvements in future water quality trading programs and NPDES permits. The Freshwater Trust believes that water quality trading programs would be stronger if they: (i) include permit conditions requiring annual project performance reporting (including photo point monitoring); (ii) require verification of project quality and/or project developers (including public registration of credits), and designate a third party to perform verification, certification and registration functions; (iii) include a compliance schedule in renewed permits that provides transparent, enforceable milestones to assure that the benefit promised is realized; (iv) include the number of units of a pollutant that a permittee needs to address (in the permit evaluation report); (v) articulate a more comprehensive set of water quality trading policies to achieve net environmental gain; and (vi) recognize "credits" as wholly capital assets in both state rule and permits. We discuss each of these in more detail.

i. Require Annual Project Performance Reporting, Including Photo Points, In Permit Conditions

In Schedule D, Condition 9, DEQ proposed a permit condition that requires an annual report confirming project performance (i.e., "monitoring") for the first five years, and provides for a more relaxed schedule thereafter.[73] As a part of The Freshwater Trust's trading contracts, which may include Wilsonville, we require annual performance reports, including photo points. We encourage DEQ to require annual monitoring at each site for the life of the credit, including annual photo points that are posted online in

[71] DEQ Water Quality Trading IMD, at 21 (§ 3.2).
[72] *See* 40 C.F.R. § 122.4(i).
[73] DEQ Request for Wilsonville Comments, at 17 (proposing to add Attachment A, § 11 to the permit).

a publicly-available credit registry.[74] DEQ does not have the resources to visit each site, and third-party visits on an annual basis would make credits cost prohibitive. Therefore, photo point monitoring and reporting is essential to ensure that these restoration actions are fulfilling compliance obligations.

ii. Require Verification and Registration of Project Quality and/or Project Developers, and A Designate a Third Party to Perform Verification, Certification and Registration Functions

As a part of The Freshwater Trust's trading contracts, which may include Wilsonville, we require third party verification, certification, and the public registration of credits. The Freshwater Trust encourages DEQ to require third-party verification, certification, and registration of project quality and/or project developers, and recommends that DEQ either agree to perform these functions, or designate a third party to do so. All permitted point sources have traditionally "self-monitored" end-of-pipe discharge limits by submitting monitoring reports on a regular schedule to the state agencies in charge of NPDES permit compliance and enforcement. The Freshwater Trust supports this system because there are important safeguards underpinning a self-reporting system, including EPA rules and state guidelines on monitoring and reporting discharges, as well as significant penalties for not providing timely, complete or accurate information in accordance with those guidelines. With point-nonpoint trading programs, numerous and disperse nonpoint sources will provide the pollution reductions needed by a single point source to meet its requirements through dozens of different types of BMPs (each with its own eligibility and implementation quality standards). Because trading shifts the location of compliance from *a* pipe to potentially *many* locations (where documenting the performance of BMPs is necessary), there are different challenges associated with verifying water quality project sites and/or project developers in a trading environment.

In order to provide regulators with the same level of confidence in project quality and/or project developers as is engendered through point source DMRs and facility oversight, there are four analogous phases of the credit issuance process that provide an opportunity to review and approve water quality trades, programs, and/or developers: project screening, verification of project quality and/or project developers, certification, and registration of credits. In particular, third party verification of project quality and/or project developers is needed to ensure quality standards, site management and long-term stewardship requirements are met over time, and registration of those certified credits on a publicly available registry provides essential credibility and transparency demanded by the public to confirm projects used by regulated entities to offset impacts are real and performing as intended over time. Verification can be of individual project sites, or more like a certification of project developers or trades. Increasingly, the need for third party verification of project sites and/or project developers is being recognized in ecosystem service markets around the country.[75]

[74] The proposed modification only calls for "pre- and post-implementation photo documentation whenever possible." *Id.* at 7 (proposing to modify § 9(c)(4)(iv) of the permit).

[75] *See, e.g.,* Margaret A. Palmer & Solange Filoso, Restoration of Ecosystem Services for Environmental Markets, 325 Science 575, 576 (2009) ("[T]he only way to ensure that credits generated by restoration of ecosystems can be associated with the delivery of ecosystem services is to have a third-party, unbiased entity verify, through direct measurements, that ecosystem functions were sufficiently restored. Independent and transparent evaluation approaches that do not rely on those who stand to profit or those tasked with regulation have been successfully employed for other environmental issues."); Willamette Partnership, Verification Protocol, at 3 (2009) ("Verification provides assurances to buyers that their credits have met the ecosystem credit accounting system's standards for additionality, quality, and sustainability … Complete, consistent and accurate verification provides the public with evidence that market activity is delivering real ecological benefits."); Senior Scientists &

In Attachment A of the permit modification proposal, DEQ proposes site verification by a third party for Wilsonville. As noted by DEQ in the proposed modification, verification assures that project lands are secured for the life of the credit, riparian restoration standards are met, and thermal credit calculations are correct, and requires that a third party accredited verifier certify credits as valid for sale, review annual monitoring reports, and perform on-site inspections every five years.[76] Although approval of individual programs that include verification is consistent with DEQ's past approach, The Freshwater Trust encourages DEQ to require third-party verification *in* the permit itself.

In addition to requiring these actions, there is still uncertainty as to which entity will perform the trading-related review functions. These functions can be performed by the participating point source, by DEQ, or by an independent third party, although final oversight authority must rest with DEQ. Some point sources may have the resources to self-verify. More often, however, point sources lack the internal capacity, expertise and funding to do so. Moreover, point sources have an inherent conflict of interest in self-verifying credits because they have incentives to be in compliance. State agencies could perform this role, but doing so would require consistent staffing, and the adoption of rigorous standards and practices. It is for these reasons that an independent third party specialist is best suited to quickly adapt to the evolving landscape, develop expertise, and scale up/down resources based on trading volume. However, DEQ has not designated an official entity to perform these functions, nor has it required these functions in its internal guidance, rule, or in the permits themselves.

This reality places The Freshwater Trust in a difficult position: it is asking permittees to undertake additional, environmentally beneficial steps that are *not required* in permit conditions or regulations because we believe it is what should be required for restoration to fulfill a NPDES compliance obligation, and because it demonstrates the level of rigor needed for an ecosystem service market to flourish—but it remains a push. To remedy this issue, DEQ could require these functions. DEQ could either perform verification or registration of the credit cycle for all programs, or formally delegate authority to a qualified third party market administrator such that the third party has official authority to develop quality standards, request information and verify project site performance, and otherwise ensure trading program consistency and integrity. DEQ would retain formal decision-making, approval, conflict of interest screening, oversight and dispute resolution authority.

iii. In the Renewal of a Permit, a Compliance Schedule Would Provide Transparent, Enforceable Milestones to Assure that the Benefit Promised is Realized; One Cannot be Inserted in a Modification

The Freshwater Trust recognizes that had Wilsonville and CH2M Hill anticipated a projected thermal exceedance when developing its 2010 permit, DEQ would have likely included a compliance schedule in the Wilsonville NPDES permit if one was deemed necessary. Although we would like to see a compliance schedule in the Wilsonville permit in conjunction with the City's water quality trading program attachment, we recognize that a compliance schedule is only appropriate in new or reissued

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Policymakers for the Bay, Nutrient Trading Subcommittee, Nutrient Trading Preliminary Investigation: Findings and Recommendations, at 4 (2012) ("Independent, rigorous, and transparent verification is essential"); Patrick Parenteau, The Brave New World of Wetland Carbon Trading, National Wetlands Newsletter, Vol. 35, No. 4, at 5 (2013) ("[T]he sequestration project must be verified by an independent third party that analyzes the amount of carbon being sequestered by the project.").

[76] *See* DEQ Request for Wilsonville Comments, at 6–7.

permits.[77] The Freshwater Trust encourages DEQ to include compliance schedules in future new or renewed permits that allow for thermal credit trading as a compliance mechanism. EPA states in its permit writer toolkit that "[p]ermitting authorities should be aware of potential time lags between BMP installation and full pollutant reduction efficiency […] If the trade agreement […] does not dictate how and when credits become available for purchase, the NPDES permit should address the time lag."[78] The 2:1 ratio included in the Oregon DEQ IMD on water quality trading accounts for part of the delay associated with water quality trading via shade restoration in that it requires the permittee to pay for twice as many kilocalories of benefit as it would need if installing a technology solution. Permittees obtain credits in a ledger upon project verification, but the additional benefit derived from the 2:1 ratio typically matriculates in the second decade of water quality trading programs when riparian shading blocks more sunlight than what would be required under a 1:1 ratio. In other words, it takes time to "meet" or "achieve" a water quality based effluent limit (WQBEL) via riparian restoration, and where available DEQ should use a compliance schedule to ensure that permittee meets that limit. In short, an entity can meet its compliance schedule targets (i.e., number of credits in a ledger) in Schedule C of an Oregon NPDES permit with a ledger of credits registered in its name, but it may not be able to meet its Schedule A effluent limits with that ledger alone. Rather, that entity should actually accrue the benefits needed by the end of a compliance schedule in order to "meet" or "achieve" its effluent limits.[79]

The Freshwater Trust believes that including compliance schedules in permit renewals provides a clearer picture of how the permittee will bridge the period between credit issuance and the date upon which the shade benefit from restoration projects is modeled to meet the facility's 1:1 effluent limit. The question of which delay is preferable (i.e., waiting 1–5 years until a technological solution can perform up to a needed level, or waiting approximately 5–15 years until shade benefits accrue) is the policy calculus that Oregon DEQ has undertaken, but in either case, a compliance schedule would provide a stronger foundation for that policy choice. The length of the compliance schedule would exceed one year in length and so must include interim requirements and dates for their achievement,[80] and achieve

[77] "A compliance schedule in an NPDES permit is *allowed only for water quality based effluent limits* that are *newly applicable to the permit*…" OAR 340-041-0061(14) (emphasis added).

[78] 2007 EPA Trading Toolkit, at 4-5 (2009). Oregon DEQ has done this in the Medford permit.

[79] The Oregon regulations support this conclusion. "*A compliance schedule* in an NPDES permit … *must comply with provisions in 40 CFR § 122.47 (including the requirement that water quality criteria must be achieved as soon as possible).*" OAR § 340-041-0061(14) (emphasis added). As does the Oregon DEQ IMD on NPDES Permits. "Depending upon the circumstances, *NPDES permits may include* a series of required steps and deadlines (i.e., a *compliance schedule*), *which upon completion*, *enables the permittee* to *meet* the permit's *water quality-based effluent limits* (see 40 CFR § 122.47 and OAR. 340-041-0061(16)). Interim effluent permit limits may also be included in certain circumstances." Oregon Dep't of Envtl. Quality, Compliance Schedules in NPDES Permits IMD, at § 1.1 (2010) (emphasis added) [hereinafter "DEQ Compliance Schedule IMD"]. Although the Compliance Schedule IMD cites to OAR 340-041-0061(16), this provision has since been renumbered to OAR 340-041-0061(14). "Meet" and "achieve" are not defined in the CFR or OARs. Analogously, if a facility pursues a technological compliance solution (i.e., a chiller for cooling water) when it cannot meet its effluent limits right away, an interim report on progress may meet the entity's compliance schedule obligation. However, by the end of the compliance schedule, the technology must actually function to the extent necessary to meet its permit load limit in order to be deemed in compliance with its permit (i.e., physically cooling the water to the degree necessary to meet its final effluent limit). Although it takes longer for shade-generating restoration projects to reach full function than a technology solution, there is a delay in either case. Thus, both situations necessitate that a compliance schedule bridge the gap until the compliance solution (shade, or chiller) provides enough thermal benefit for the entity to *meet* its effluent limit.

[80] 40 C.F.R. § 122.47(a)(3); *see* OAR 340-041-0061(14).

compliance "as soon as possible." [81] The Oregon compliance schedule IMD provides DEQ the flexibility to include long-term schedules for compliance options with benefits that clearly outweigh those of a faster option.[82] Similarly, EPA's Hanlon Memo contemplates that some NPDES permit compliance schedules may exceed the length of the permit term.[83] Such a schedule would include an enforceable sequence of actions, and an enforceable final effluent limit/date. Also helpful—although not enforceable—would be a series of modeled shade accrual targets. In addition, a longer permit compliance schedule is preferable to administrative compliance schedule orders because the latter affords limited assurances for permittees.[84]

iv. DEQ Should Quantify the Number of Units of a Pollutant that a Permittee Needs to Address in the Permit Evaluation Report

This proposed modification to the Wilsonville permit is limited to Schedules B and D, but for permit renewals or for modifications that include Schedule A effluent limits, The Freshwater Trust would support a modification of the permit evaluation report that clarifies the number of units of a pollutant that the permittee will need to address with water quality trading. In addition, we would support inclusion in the evaluation report of an assessment of the number of credits a permittee may need during a critical conditions period: warmest effluent temperatures, high effluent flows, and low river flows (7Q10 flows). The simultaneous occurrence of these critical conditions would result in the largest possible thermal exceedance a facility may experience.

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[81] 40 C.F.R. § 122.47(a)(1). Oregon DEQ states that: "[f]actors relevant to the determination of 'as soon as possible' include: consideration of the steps needed to modify or install treatment facilities, operations, and other measures and the time that those steps would take. The permit write may also take into account … [t]he type of facilities being constructed or programs being implemented … Permit writers should consider these timeframes but also recognize that these timeframes might include project timeframes that may have not been based on the 'as soon as possible' requirement." DEQ Compliance Schedule IMD, § 3.2 (emphasis added).

[82] "DEQ needs to consider the relative cost and time required to implement the other options. If another option is financially feasible and can be implemented in a significantly shorter period, DEQ should not approve a compliance schedule for the permittee preferred option *unless its benefits clearly outweigh those of the faster option*. DEQ may consider other environmental or societal benefits associated with a particular option, as long as the implementation periods are not significantly longer. It is best if implementation periods do not exceed the term of the permit." DEQ Compliance Schedule IMD, § 3.2.

[83] "Any compliance schedule *that extends past the expiration date of a permit* must include the final effluent limitations in the permit in order to ensure enforceability of the compliance schedule as required by CWA section 502(17) and 40 C.F.R. § 122.2 (definition of schedule of compliance)." Memorandum from James A. Hanlon, Director, Office of Wastewater Management, to Alexis Strauss, Director, Water Division, EPA Region 9, Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits, at 2 (May 10, 2007), *available at* http://water.epa.gov/lawsregs/guidance/wetlands/upload/signed-hanlon-memo.pdf (emphasis added).

[84] Oregon has relied on long-term compliance schedule orders that exceed the length of a permit in the past. For example, the Astoria combined sewer outfall (CSO) did not comply with some Oregon water quality standards. In 1993, Astoria and EQC entered a stipulated final order (SFO) that "includes criteria and a schedule to bring CSO points into compliance with the Clean Water Act and Oregon's water quality standards by December 1, 2022." OR Permit 102397 (EPA # OR0027561), Waste Discharge Permit Evaluation, at 3 (citing SFO #WQMW-NWR-92-247, issued January 7, 1993), *available at* http://www.deq.state.or.us/wqpr/2347_200912170000cCS02.PDF. Although this mechanism allows for the creation of longer timelines, such orders may not hold weight against third party litigants. *See* Washington Public Interest Research Group v. Pendleton Woolen Mills, 11 F.3d 883, 902 n. 10 (9th Cir.1993) (holding that because the type of enforcement action that EPA had taken was not an administrative penalty action under 33 U.S.C. § 1319(g) but rather an administrative compliance action under 33 U.S.C. § 1319(a), a citizen suit could still be maintained to enforce the limits and deadlines contained in the original permit).

This information would not create or reflect permit limits, but would be used for planning and evaluation purposes only. However, through the inclusion of an assessment of a potential "critical conditions" thermal exceedance in the permit evaluation report, DEQ can: 1) ensure the adequacy of any planned water quality trading option; 2) ensure that a permittee is well suited for a water quality trading solution; and 3) determine that a permittee will hold a sufficient number of credits to remain in compliance and meet their future needs. In addition, this assessment will allow the public to more easily identify how much load (i.e., kilocalories/day) a facility needs to address.

v. Articulate a More Comprehensive Set of Water Quality Trading Policies to Achieve Net Environmental Gain

The Freshwater Trust encourages DEQ to continually evaluate the best mechanisms to achieve net environmental gain. Currently, in the case of water quality trading, DEQ requires a 2:1 trading ratio that offsets temporal loss in the short-term, and will result in net benefits in the long-term. However, The Freshwater Trust believes that DEQ could also articulate how this 2:1 trading ratio might be combined with site specific baseline and credit renewal policies so as to further ensure both short- and long-term gain.

For example, DEQ could evaluate developing a standardized, scientifically appropriate, scalable, site-specific baseline policy. As long as TMDLs follow their current structure, calculating baseline will be a cumbersome process that makes it difficult to determine whether we are achieving environmental gain over time, and to scale trading programs.[85] Therefore, The Freshwater Trust encourages DEQ to adopt an approach for calculating a scientifically-based, site-specific baseline retirement percentage that allows for trading to yield net environmental gain at the outset. This sets the stage for quantifying all nonpoint source actions to ensure watershed-wide gain over time.[86]

Depending on how site specific baseline policies interact with credit renewal and trading ratio policies, and given the feedback-intensive data loops, DEQ could refine and adjust baseline requirements over time to generate more significant environmental benefits, and could include these benchmarks in TMDLs to help serve as guideposts. Further, phased baseline amounts could incentivize early participation in trading programs, especially if coupled with guarantees that entities that engage in trading now could lock in baseline retirement percentage for subsequent trading cycles.

vi. Recognize "Credits" as Wholly Capital Assets

The current uncertainty surrounding the accounting of water quality trading credits can hinder a permittee's ability to finance the purchase of those credits, especially when compared with grey infrastructure solutions. Credits are certificated, tradable goods with an ascertainable value. To the extent a credit purchaser can add credit assets to its capital asset ledger, as allowed under commonly accepted accounting principles and relevant law, we encourage DEQ to support this practice so as to increase the credit purchaser's ability to leverage capital asset funding mechanisms. Treating credits as capital assets would increase the asset side of an entity's balance sheet and increase its bond rating, SRF loans. It also provides a mechanism to more easily fund ongoing maintenance and monitoring. Currently, many permittees are concerned that most maintenance and monitoring funding is *not* eligible

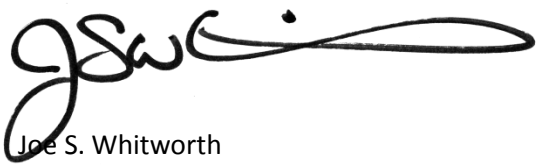
[85] *See* discussion *supra* of calculating baseline in Section II(C)(iv).
[86] *See supra* Section I(B).

to be covered by SRF loans.[87] The Governmental Accounting Standards Board (GASB) defines a capital asset as "improvements to land … infrastructure, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period."[88] The Freshwater Trust encourages DEQ to formally incorporate this understanding into its Water Quality Trading IMD, its SRF eligibility determinations, and all trading-related permits such that it will be clear to permittees that they can purchase "credits" and use SRF funding to pay for the entire purchase, thus minimizing laborious cost splitting among "capital" and "non-capital" aspects of a credit.

III. **Conclusion**

The choice between a cooling tower and quantified riparian restoration projects stands stark. The proposed modification of the Wilsonville permit is the best available alternative to address the City's projected potential thermal exceedance. There is room for improvement going forward, but the proposed solution is consistent with existing law and more importantly, provides the river with the outcomes it needs most. Furthermore, the proposed water quality trading program represents a new standard of rigor and accountability in conservation that produces compliance-grade restoration actions and provides a viable path toward new and meaningful environmental gains. Imperiled waters, species, and ecosystems have urgent and growing needs; none of these can afford additional delay and inaction.

Yours in conservation,



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[87] The SRF regulations list eligible water quality projects and project related costs. OAR 340-054-0015. This list does not include monitoring and maintenance costs (because most of the projects are capital-type projects), and does not refer to water quality trading. Unofficially, DEQ appears to have interpreted the majority of monitoring and maintenance fees associated with water quality trading as ineligible for reimbursement from SRF funds.

[88] Governmental Accounting Standards Board (GASB) Statement No. 34, Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments, ¶ 19.